L Number	Hits	Search Text	DB	Time stamp
1	1425	((dual adi damascene) or (((multilevel or	USPAT;	2004/07/22 18:11
-	1.20	multi adj level) same interconnect\$3) same	US-PGPUB;	
ļ		semiconduct\$4)).ti,ab.	EPO; JPO;	
			IBM_TDB	0004/07/00 17 00
2	702	(((dual adj damascene) or (((multilevel or	USPAT;	2004/07/22 17:29
~.		multi adi level) same interconnect\$3) same	US-PGPUB;	İ
	ļ	semiconduct\$4)).ti,ab.) and etch\$3 ad]	EPO; JPO;	
1		stop\$4 same (insulat\$3 or dielectric\$4)	IBM_TDB	2004/05/00 17 01
3	679	(((dual adi damascene) or ((multilevel	USPĀT;	2004/07/22 17:31
J		or multi adi level) same interconnect\$3)	US-PGPUB;	
		same semiconduct\$4)).ti,ab.) and etch\$3	EPO; JPO;	
		adi stop\$4 same (insulat\$3 or	IBM_TDB	
		dielectric\$4)) and (via or hole or void or		
		opening or trench\$3 or plug\$3) same		
		(conduct\$4 or metal\$8)		0004/07/00 17:00
4	438	((((dual adi damascene) or (((multilevel	USPAT;	2004/07/22 17:32
_		or multi adi level) same interconnect\$3)	US-PGPUB;	
		same semiconduct\$4)).ti,ab.) and etch\$3	EPO; JPO;	1
		adj stop\$4 same (insulat\$3 or	IBM_TDB	
		dielectric\$4)) and (via or hole or void or	ļ	
	1	opening or trench\$3 or plug\$3) same		1.
		(conduct\$4 or metal\$8)) and etch\$3 adj		
		stop\$4 same (resist or photoresist)		2004/07/22 17:34
5	218	(((((dual adj damascene) or (((multilevel	USPAT;	2004/01/22 11:34
		or multi adj level) same interconnect\$3)	US-PGPUB;	,
		same semiconduct\$4)).ti,ab.) and etch\$3	EPO; JPO;	
		adj stop\$4 same (insulat\$3 or	IBM_TDB	
		dielectric\$4)) and (via or hole or void or	}	
		opening or trench\$3 or plug\$3) same		
		(conduct\$4 or metal\$8)) and etch\$3 adj		
		stop\$4 same (resist or photoresist)) and		
		(insulat\$3 or dielectric) same ( (("USG"		
		or oxide or "O.sub."?) same (high adj		
		density adj plasma or "HDP")) or (oxide or		
		"O.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		-
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD" or low adj pressure		
		adj chemical adj vapor adj deposition or		
1		low adj pressure adj "CVD" or "LPCVD") or		
		spin adj on adj glass or "SOG" or tetra		1
		adj ethyl adj ortho adj silicate or		
		tetraethyl adj orto adj silicate or		
		tetraethyl adj orthosilicate or tetra adj		
İ		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS" )		

				10001/07/00 17 07
6	202	((((((dual adj damascene) or (((multilevel or multi adj level) same	USPAT; US-PGPUB;	2004/07/22 17:37
		interconnect\$3) same	EPO; JPO; IBM TDB	
	1	<pre>semiconduct\$4)).ti,ab.) and etch\$3 adj stop\$4 same (insulat\$3 or dielectric\$4))</pre>	1011_100	
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
1		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ( (("USG" or oxide or		
] [		"O.sub."?) same (high adj density adj		1
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		!
		"PECVD" or low adj pressure adj chemical		1
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj on adj glass or "SOG" or tetra adj ethyl		1
1		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS" )) and		
		(insulat\$3 or dielectric) same thick\$4		0004/07/00 17 00
7	100	(((((((dual adj damascene) or	USPAT;	2004/07/22 17:39
		(((multilevel or multi adj level) same	US-PGPUB;	
		interconnect\$3) same	EPO; JPO; IBM TDB	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IDM_IDD	
		stop\$4 same (insulat\$3 or dielectric\$4)) and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ( (("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		ļ
		same (plasma adj enhanced adj chemical adj		
·		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or "PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
,	İ	pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS" )) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same ( ((nitride or "N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or	1	
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
į		or (hafnium or "Hf") adj oxide or "Hf0" or (aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3" )		
1	1	auj 0.3ub.0 /	1	

		USPAT;	2004/07/22 17:41
8	93 (((((((((dual adj damascene) or	US-PGPUB;	2004/01/22 11:41
	(((multilevel or multi adj level) same	EPO; JPO;	
	interconnect\$3) same		
	semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM_TDB	
	stop\$4 same (insulat\$3 or dielectric\$4))		
	and (via or hole or void or opening or		
	trench\$3 or plug\$3) same (conduct\$4 or		
	metal\$8)) and etch\$3 adj stop\$4 same		
	(resist or photoresist)) and (insulat\$3 or		
	dielectric) same ( (("USG" or oxide or		
	"O.sub."?) same (high adj density adj		
	plasma or "HDP")) or (oxide or "0.sub."?)		
	same (plasma adj enhanced adj chemical adj		
	vapor adj deposition or plasma adj		
	enhanced adj "CVD" or plasma adj "ECVD" or		
	"PECVD" or low adj pressure adj chemical		
	adj vapor adj deposition or low adj		
	pressure adj "CVD" or "LPCVD") or spin adj		
	on adj glass or "SOG" or tetra adj ethyl		
	adj ortho adj silicate or tetraethyl adj		
	orto adj silicate or tetraethyl adj		
	orthosilicate or tetra adj		
	ethylorthosilicate or		
	tetraethylorthosilicate or "TEOS" )) and		
	(insulat\$3 or dielectric) same thick\$4)		
	and etch\$3 adj stop\$4 same ( ((nitride or		
	"N.sub."?) same (plasma adj enhanced adj		
	chemical adj vapor adj deposition or		
	plasma adj enhanced adj "CVD" or plasma		
	adj "ECVD" or "PECVD")) or (silicon or		
	"Si") adj oxynitride or siliconoxynitride		
	or silicon adj "ON" or "SiON" or (tantalum		
	or "Ta") adj oxide or "Ta.sub.2" adj		
	"O.sub.5" or (zinc or "Zn") adj oxide or		
	"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
	or "Zr") adj oxide or "Zr" adj "O.sub.2"		
	or (hafnium or "Hf") adj oxide or "Hf0" or		
	(aluminum or "Al") adjoxide or "Al.sub.2"		
	adj "O.sub.3" )) and etch\$3 adj stop\$4		
	1 2		
	same thick\$4		J

9	90 ((((((((dual adj damascene) or	USPAT;	2004/07/22 17:43
	(((multilevel or multi adj level) same	US-PGPUB;	
	interconnect\$3) same	EPO; JPO;	
	semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM_TDB	
	<pre>stop\$4 same (insulat\$3 or dielectric\$4))</pre>		
	and (via or hole or void or opening or		
	trench\$3 or plug\$3) same (conduct\$4 or		
	metal\$8)) and etch\$3 adj stop\$4 same		
	(resist or photoresist)) and (insulat\$3 or		
	dielectric) same ( (("USG" or oxide or		
	"O.sub."?) same (high adj density adj		
	plasma or "HDP")) or (oxide or "O.sub."?)		
	same (plasma adj enhanced adj chemical adj		
	vapor adj deposition or plasma adj		
	enhanced adj "CVD" or plasma adj "ECVD" or		
	"PECVD" or low adj pressure adj chemical		
	adj vapor adj deposition or low adj		
	pressure adj "CVD" or "LPCVD") or spin adj		
	on adj glass or "SOG" or tetra adj ethyl		
	adj ortho adj silicate or tetraethyl adj		
	orto adj silicate or tetraethyl adj		
	orthosilicate or tetra adj		
	ethylorthosilicate or		
	tetraethylorthosilicate or "TEOS" )) and		
	(insulat\$3 or dielectric) same thick\$4)		
	and etch\$3 adj stop\$4 same ( ((nitride or		
	"N. sub. "?) same (plasma adj enhanced adj		
	chemical adj vapor adj deposition or		
	plasma adj enhanced adj "CVD" or plasma		
	adj "ECVD" or "PECVD")) or (silicon or		
	"Si") adj oxynitride or siliconoxynitride		
	or silicon adj "ON" or "SiON" or (tantalum		
	or "Ta") adj oxide or "Ta.sub.2" adj		
*	"O.sub.5" or (zinc or "Zn") adj oxide or		
	"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
	or "Zr") adj oxide or "Zr" adj "O.sub.2"		
	or (hafnium or "Hf") adj oxide or "Hf0" or		
	(aluminum or "Al") adj oxide or "Al.sub.2"		
	adj "O.sub.3" )) and etch\$3 adj stop\$4		
	same thick\$4) and (conduct\$4 or metal\$8)		
	same (aluminum or "Al" or copper or "Cu"		
	or gold or "Au" or silver or "Ag" or		
	chrome or chromium or "Cr")		
	(chrome or chromium or "Cr")		

10	72	(((((((((((dual adj damascene) or	USPAT;	2004/07/22 17:47
~~	/2	(((multilevel or multi adj level) same	US-PGPUB;	1004/01/22 11.4/
		interconnect\$3) same	EPO; JPO;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))		
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ( (("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS" )) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same ( ((nitride or		
,		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		·
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or "Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		
1		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
1		or (hafnium or "Hf") adj oxide or "Hf0" or		
}		(aluminum or "Al") adj oxide or "Al.sub.2"		
İ		adj "O.sub.3" )) and etch\$3 adj stop\$4		
		same thick\$4) and (conduct\$4 or metal\$8)		
		same (aluminum or "Al" or copper or "Cu"		
		or gold or "Au" or silver or "Ag" or		
ļ		chrome or chromium or "Cr")) and		
		(conduct\$4 or metal\$8 or aluminum or "Al"		
		or copper or "Cu" or gold or "Au" or		
		silver or "Ag" or chrome or chromium or		
		"Cr") same thick\$4		
11	2914	430/312,314,316-317.ccls.	USPAT;	2004/07/22 17:50
***************************************		, , , , , , , , , , , , , , , , , , , ,	US-PGPUB;	2301/0//22 1/.30
ĺ			EPO; JPO;	, ,
			IBM TDB	
12	8781	438/584,622,624,637-638,700,702,723-724.ccls	SUSPAT:	2004/07/22 17:50
		, , , , , , , , , , , , , , , , , , , ,	US-PGPUB;	
			EPO; JPO;	
	1		,	

13	900	(430/312,314,316-317.ccls. or 438/584,622,624,637-638,700,702,723-724.ccl	USPAT;	2004/07/22 17:54
				1
		and (dual adj damascene and (etch\$3 near3	EPO; JPO;	
		stop\$4 or hardmask\$3 or hard\$4 near3	IBM_TDB	
		mask\$3)) not (((((((((dual adj		
l		damascene) or (((multilevel or multi adj		
İ		level) same interconnect\$3) same	ļ	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	İ	
		stop\$4 same (insulat\$3 or dielectric\$4))		
1		and (via or hole or void or opening or		
1		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ( (("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
-		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
ł		enhanced adj "CVD" or plasma adj "ECVD" or		
ĺ				
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS" )) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same ( ((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		
1		or silicon adj "ON" or "SiON" or (tantalum		
		or "To") add avide or "To ask a" add		
		or "Ta") adj oxide or "Ta.sub.2" adj		
1		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "HfO" or		
		(aluminum or "Al") adj oxide or "Al.sub.2"		
1	ļ	adj "O.sub.3" )) and etch\$3 adj stop\$4		
		same thick\$4) and (conduct\$4 or metal\$8)		
ļ		same (aluminum or "Al" or copper or "Cu"		
İ		or gold or "Au" or silver or "Ag" or		
4	566	¢hremeadj dhmemcemeortfCab))andd(etch\$3	USPAT;	2004/07/22 18:15
		4dondtop\$4 sammetal\$8oorhelemonumood 821"	US-PGPUB;	= 3 - 2 , 5 : , 5 2 1 3 : 1 3
		openoppeorotrefiuli\$3rogopdug\$3"Anämer	EPO; JPO;	
La Company		\$cduduco\$4"Ag"metach\$8phe or chromium or	IBM TDB	
		"Cr") same thick\$4)	TOU IDD	<u> </u>

15 234	((dual adj damascene).ti,ab. and (etch\$3	USPAT;	2004/07/22 18:16
	adj stop\$4 same (via or hole or void or	US-PGPUB;	10.10
	opening or trench\$3 or plug\$3) same	EPO; JPO;	
	(conduct\$4 or metal\$8))) not	IBM_TDB	
	((((((((((((((((((((((((((((((((((((((		
	interconnect\$3) same		
	semiconduct\$4)).ti,ab.) and etch\$3 adj		
	stop\$4 same (insulat\$3 or dielectric\$4))		
	and (via or hole or void or opening or		
	trench\$3 or plug\$3) same (conduct\$4 or metal\$8)) and etch\$3 adj stop\$4 same		
	(resist or photoresist)) and (insulat\$3 or		
	dielectric) same ( (("USG" or oxide or		
	"O.sub."?) same (high adj density adj	ĺ	
	plasma or "HDP")) or (oxide or "O.sub."?)		
	same (plasma adj enhanced adj chemical adj vapor adj deposition or plasma adj		
	enhanced adj "CVD" or plasma adj "ECVD" or		
	"PECVD" or low adj pressure adj chemical		
	adj vapor adj deposition or low adj		
	pressure adj "CVD" or "LPCVD") or spin adj		
	on adj glass or "SOG" or tetra adj ethyl adj ortho adj silicate or tetraethyl adj		
	orto adj silicate or tetraethyl adj		
	orthosilicate or tetra adj		
	ethylorthosilicate or		
	tetraethylorthosilicate or "TEOS" )) and		
	(insulat\$3 or dielectric) same thick\$4) and etch\$3 adj stop\$4 same ( ((nitride or		
	"N.sub."?) same (plasma adj enhanced adj		
	chemical adj vapor adj deposition or		
	plasma adj enhanced adj "CVD" or plasma		
	adj "ECVD" or "PECVD")) or (silicon or "Si") adj oxynitride or siliconoxynitride		
	or silicon adj "ON" or "SiON" or (tantalum		
	or "Ta") adj oxide or "Ta.sub.2" adj		
	"O.sub.5" or (zinc or "Zn") adj oxide or		
	"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
	or "Zr") adj oxide or "Zr" adj "O.sub.2" or (hafnium or "Hf") adj oxide or "HfO" or		
	(aluminum or "Al") adj oxide or "Al.sub.2"		
	adj "O.sub.3" )) and etch\$3 adj stop\$4		
	same thick\$4) and (conduct\$4 or metal\$8)		
	same (aluminum or "Al" or copper or "Cu"		
	or gold or "Au" or silver or "Ag" or chrome or chromium or "Cr")) and		
	(conduct\$4 or metal\$8 or aluminum or "Al"		
	or copper or "Cu" or gold or "Au" or		
	silver or "Ag" or chrome or chromium or		
	"Cr") same thick\$4) not ((430/312,314,316-317.ccls. or		
	438/584,622,624,637-638,700,702,723-724.ccls	s.)	
	and (dual adj damascene and (etch\$3 near3	. ,	
	stop\$4 or hardmask\$3 or hard\$4 near3		
	mask\$3)) not (((((((((((dual adj		
	damascene) or (((multilevel or multi adj level) same interconnect\$3) same		
	semiconduct\$4)).ti,ab.) and etch\$3 adj		
	stop\$4 same (insulat\$3 or dielectric\$4))		
	and (via or hole or void or opening or		
	trench\$3 or plug\$3) same (conduct\$4 or metal\$8)) and etch\$3 adj stop\$4 same		
	(resist or photoresist)) and (insulat\$3 or		
	dielectric) same ( (("USG" or oxide or		
	"O.sub."?) same (high adj density adj		
	plasma or "HDP")) or (oxide or "O.sub."?)		
	same (plasma adj enhanced adj chemical adj vapor adj deposition or plasma adj		
	enhanced adj "CVD" or plasma adj "ECVD" or		
	"PECVD" or low adj pressure adj chemical		
	adj vapor adj deposition or low adj		
Search History 7/	April 2003   Temperature   April 2003   Apri		
:\APPS\east\workspa	Cus with chars was "SOG" or tetra adj ethyl adj ortho adj silicate or tetraethyl adj		
	orto adj silicate or tetraethyl adj		
	3	·	I

_	2669	430/312,314,316-317.ccls.	USPAT;	2004/02/19 08:20
	2009	430/312,314,310-317.0015.	US-PGPUB;	2004/02/19 08:20
			EPO; JPO;	
			IBM TDB	
_	7866	438/584,622,624,637-638,700,702,723-724.ccl		2004/02/19 08:20
			US-PGPUB;	
			EPO; JPO;	
			IBM TDB	
-	1913	dual adj damascene and (etch\$3 near3	USPAT;	2004/02/19 08:21
		stop\$4 or hardmask\$3 or hard\$4 near3	US-PGPUB;	
		mask\$3)	EPO; JPO;	
			IBM_TDB	
-	10406	430/312,314,316-317.ccls. or	USPAT;	2003/09/13 09:31
		438/584,622,624,637-638,700,702,723-724.ccl		
			EPO; JPO;	
_	723	(430/312,314,316-317.ccls. or	IBM_TDB USPAT;	2002/00/12 00:21
	123	438/584,622,624,637-638,700,702,723-724.ccl		2003/09/13 09:31
		and (dual adj damascene and (etch\$3 near3	EPO; JPO;	
		stop\$4 or hardmask\$3 or hard\$4 near3	IBM TDB	
_	1139	madkal)adj damascene) or ((multilevel or	USPAT;	2004/02/19 07:59
1		multi adj level) same interconnect\$3) same	US-PGPUB;	2001,02/15 07.39
		semiconduct\$4)).ti,ab.	EPO; JPO;	
			IBM TDB	
-	550	(((dual adj damascene) or (((multilevel or	USPAT;	2004/02/19 08:01
		multi adj level) same interconnect\$3) same	US-PGPUB;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	EPO; JPO;	
		stop\$4 same (insulat\$3 or dielectric\$4)	IBM_TDB	
-	527	((((dual adj damascene) or (((multilevel	USPAT;	2004/02/19 08:03
1		or multi adj level) same interconnect\$3)	US-PGPUB;	
		same semiconduct\$4)).ti,ab.) and etch\$3	EPO; JPO;	
		adj stop\$4 same (insulat\$3 or	IBM_TDB	
		dielectric\$4)) and (via or hole or void or		
1		opening or trench\$3 or plug\$3) same		
	246	(conduct\$4 or metal\$8)		
_	346	(((((dual adj damascene) or (((multilevel	USPAT;	2004/02/19 08:04
		or multi adj level) same interconnect\$3) same semiconduct\$4)).ti,ab.) and etch\$3	US-PGPUB;	
İ		adj stop\$4 same (insulat\$3 or	EPO; JPO; IBM TDB	
		dielectric\$4)) and (via or hole or void or	TDM_TDB	
	[	opening or trench\$3 or plug\$3) same		
		(conduct\$4 or metal\$8)) and etch\$3 adj		
		stop\$4 same (resist or photoresist)		
-	179	(((((dual adj damascene) or (((multilevel	USPAT;	2004/02/19 08:05
		or multi adj level) same interconnect\$3)	US-PGPUB;	
		same semiconduct\$4)).ti,ab.) and etch\$3	EPO; JPO;	
i		adj stop\$4 same (insulat\$3 or	IBM_TDB	
		dielectric\$4)) and (via or hole or void or	_	
		opening or trench\$3 or plug\$3) same		
		(conduct\$4 or metal\$8)) and etch\$3 adj		
		stop\$4 same (resist or photoresist)) and		
		(insulat\$3 or dielectric) same ( (("USG"		
		or oxide or "O.sub."?) same (high adj		
		density adj plasma or "HDP")) or (oxide or "O.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD" or low adj pressure		
		adj chemical adj vapor adj deposition or		
}		low adj pressure adj "CVD" or "LPCVD") or		
		spin adj on adj glass or "SOG" or tetra		
		adj ethyl adj ortho adj silicate or		
İ		tetraethyl adj orto adj silicate or		
	1	tetraethyl adj orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS" )		ŀ

Page 8

168	(((((((((dual adj damascene) or (((multilevel or multi adj level) same interconnect\$3) same semiconduct\$4)).ti,ab.) and etch\$3 adj stop\$4 same (insulat\$3 or dielectric\$4)) and (via or hole or void or opening or trench\$3 or plug\$3) same (conduct\$4 or metal\$8)) and etch\$3 adj stop\$4 same (resist or photoresist)) and (insulat\$3 or dielectric) same (("USG" or oxide or "O.sub."?) same (high adj density adj plasma or "HDP")) or (oxide or "O.sub."?) same (plasma adj enhanced adj chemical adj vapor adj deposition or plasma adj "ECVD" or "PECVD" or low adj pressure adj chemical adj vapor adj deposition or low adj pressure adj "CVD" or "LPCVD") or spin adj on adj glass or "SOG" or tetra adj ethyl adj ortho adj silicate or tetraethyl adj orthosilicate or tetraethyl adj ethylorthosilicate or tetraethyl adj ethylorthosilicate or tetraethyl or tetraethylorthosilicate or "TEOS")) and	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/02/19 08:08
- 84	(insulat\$3 or dielectric) same thick\$4 ((((((((((dual adj damascene) or  (((multilevel or multi adj level) same interconnect\$3) same semiconduct\$4)).ti,ab.) and etch\$3 adj stop\$4 same (insulat\$3 or dielectric\$4)) and (via or hole or void or opening or trench\$3 or plug\$3) same (conduct\$4 or metal\$8)) and etch\$3 adj stop\$4 same (resist or photoresist)) and (insulat\$3 or dielectric) same ((("USG" or oxide or "O.sub."?) same (high adj density adj plasma or "HDP")) or (oxide or "O.sub."?) same (plasma adj enhanced adj chemical adj vapor adj deposition or plasma adj enhanced adj "CVD" or plasma adj "ECVD" or "PECVD" or low adj pressure adj chemical adj vapor adj deposition or low adj pressure adj "CVD" or "LPCVD") or spin adj on adj glass or "SOG" or tetra adj ethyl adj ortho adj silicate or tetraethyl adj orthosilicate or tetra adj ethylorthosilicate or "TEOS")) and (insulat\$3 or dielectric) same thick\$4) and etch\$3 adj stop\$4 same (((nitride or "N.sub."?) same (plasma adj enhanced adj chemical adj vapor adj deposition or plasma adj enhanced adj "CVD" or plasma adj "ECVD" or "PECVD")) or (silicon or "Si") adj oxynitride or siliconoxynitride or silicon adj "ON" or "SiON" or (tantalum or "Ta") adj oxide or "Ta.sub.2" adj "O.sub.5" or (zinc or "Zn") adj oxide or "Zn" adj "O.sub."2 or "ZnO" or (zirconium or "Zr") adj oxide or "Zr" adj "O.sub.2" or (hafnium or "Hf") adj oxide or "HfO" or (aluminum or "Al") adj oxide or "Al.sub.2" adj "O.sub.3")	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/02/19 08:09

-	77 ((((((((dual adj damascene) or	USPAT;	2004/02/19 08:12
	(((multilevel or multi adj level) same	US-PGPUB;	
	interconnect\$3) same	EPO; JPO;	!
	semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
	stop\$4 same (insulat\$3 or dielectric\$4))	_	
	and (via or hole or void or opening or		
	trench\$3 or plug\$3) same (conduct\$4 or		
	metal\$8)) and etch\$3 adj stop\$4 same		
	(resist or photoresist)) and (insulat\$3 or		
	dielectric) same ( (("USG" or oxide or		
	"O.sub."?) same (high adj density adj		
	plasma or "HDP")) or (oxide or "O.sub."?)		
	same (plasma adj enhanced adj chemical adj		1
	vapor adj deposition or plasma adj		
	enhanced adj "CVD" or plasma adj "ECVD" or		
	"PECVD" or low adj pressure adj chemical		
	adj vapor adj deposition or low adj		
	pressure adj "CVD" or "LPCVD") or spin adj		
	on adj glass or "SOG" or tetra adj ethyl		
	adj ortho adj silicate or tetraethyl adj	İ	-
	orto adj silicate or tetraethyl adj		
	orthosilicate or tetra adj		
	ethylorthosilicate or		
	tetraethylorthosilicate or "TEOS" )) and		·
	(insulat\$3 or dielectric) same thick\$4)		
	and etch\$3 adj stop\$4 same ( ((nitride or		<u> </u>
	"N.sub."?) same (plasma adj enhanced adj		
	chemical adj vapor adj deposition or		
	plasma adj enhanced adj "CVD" or plasma		
	adj "ECVD" or "PECVD")) or (silicon or		
	"Si") adj oxynitride or siliconoxynitride		
	or silicon adj "ON" or "SiON" or (tantalum		
	or "Ta") adj oxide or "Ta.sub.2" adj		
	"O.sub.5" or (zinc or "Zn") adj oxide or		
	"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
	or "Zr") adj oxide or "Zr" adj "O.sub.2"		
	or (hafnium or "Hf") adj oxide or "HfO" or		
	(aluminum or "Al") adj oxide or "Al.sub.2"		
	adj "O.sub.3" )) and etch\$3 adj stop\$4		
	same thick\$4		

- 7	5 ((((((((dual adj damascene) or	USPAT;	2004/02/19 08:14
	(((multilevel or multi adj level) same	US-PGPUB;	
	interconnect\$3) same	EPO; JPO;	
	semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
	stop\$4 same (insulat\$3 or dielectric\$4))	_	
	and (via or hole or void or opening or		
	trench\$3 or plug\$3) same (conduct\$4 or		
	metal\$8)) and etch\$3 adj stop\$4 same		te
	(resist or photoresist)) and (insulat\$3 or		
	dielectric) same ( (("USG" or oxide or		
	"O.sub."?) same (high adj density adj		
	plasma or "HDP")) or (oxide or "O.sub."?)		
1	same (plasma adj enhanced adj chemical adj		
1	vapor adj deposition or plasma adj		
	enhanced adj "CVD" or plasma adj "ECVD" or		
	"PECVD" or low adj pressure adj chemical		
1	adj vapor adj deposition or low adj		
	pressure adj "CVD" or "LPCVD") or spin adj		
1	on adj glass or "SOG" or tetra adj ethyl		
1	adj ortho adj silicate or tetraethyl adj		
	orto adj silicate or tetraethyl adj		
1	orthosilicate or tetra adj		
	ethylorthosilicate or		
	tetraethylorthosilicate or "TEOS" )) and		
	(insulat\$3 or dielectric) same thick\$4)		
	and etch\$3 adj stop\$4 same ( ((nitride or		
	"N.sub."?) same (plasma adj enhanced adj		
	chemical adj vapor adj deposition or		
	plasma adj enhanced adj "CVD" or plasma		
	adj "ECVD" or "PECVD")) or (silicon or		
	"Si") adj oxynitride or siliconoxynitride		
	or silicon adj "ON" or "SiON" or (tantalum		
	or "Ta") adj oxide or "Ta.sub.2" adj		
	"O.sub.5" or (zinc or "Zn") adj oxide or		
	"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
	or "Zr") adj oxide or "Zr" adj "O.sub.2"		
	or (hafnium or "Hf") adj oxide or "Hf0" or		
	(aluminum or "Al") adj oxide or "Al.sub.2"		
	adj "O.sub.3" )) and etch\$3 adj stop\$4		
	same thick\$4) and (conduct\$4 or metal\$8)		
	same (aluminum or "Al" or copper or "Cu"		
	or gold or "Au" or silver or "Ag" or	,	
1	chrome or chromiumn or "Cr")		

			IICDAM.	2004/02/10 00 17
-	59	((((((((((dual adj damascene) or	USPAT;	2004/02/19 08:17
		(((multilevel or multi adj level) same	US-PGPUB;	
1		interconnect\$3) same	EPO; JPO;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM_TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))		
		and (via or hole or void or opening or		
	j	trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ( (("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS" )) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same ( ((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or		
	1		}	
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "HfO" or		1
		(aluminum or "Al") adj oxide or "Al.sub.2"		1
		adj "O.sub.3" )) and etch\$3 adj stop\$4		
		<pre>same thick\$4) and (conduct\$4 or metal\$8)</pre>		
		same (aluminum or "Al" or copper or "Cu"		
		or gold or "Au" or silver or "Ag" or		
		chrome or chromiumn or "Cr")) and		
		(conduct\$4 or metal\$8 or aluminum or "Al"		
		or copper or "Cu" or gold or "Au" or		
		silver or "Aq" or chrome or chromiumn or		
		"Cr") same thick\$4		
		OT I Same CHICKAA	İ	

		1 / / / 0 / 0 / 0 / 0 / 0 / 0 / 0 / 0 /	TIGENE	0004/00/10 00 10
-	681	((430/312,314,316-317.ccls. or	USPAT;	2004/02/19 08:19
		438/584,622,624,637-638,700,702,723-724.ccl and (dual adj damascene and (etch\$3 near3	EPO; JPO;	
1		stop\$4 or hardmask\$3 or hard\$4 near3	IBM TDB	
		mask\$3))) not ((((((((((dual adj	1511_155	
		damascene) or (((multilevel or multi adj		
		level) same interconnect\$3) same		
		semiconduct\$4)).ti,ab.) and etch\$3 adj		
		stop\$4 same (insulat\$3 or dielectric\$4))		
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ( (("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)	-	
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS" )) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same ( ((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma   adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "HfO" or		
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3" )) and etch\$3 adj stop\$4		
		same thick\$4) and (conduct\$4 or metal\$8)		
		same (aluminum or "Al" or copper or "Cu" or gold or "Au" or silver or "Ag" or		
	1	or gold or "Au" or silver or "Ag" or   吃	USPAT;	2003/00/15 10:00
-	1	(conduct\$4 or metal\$8 or aluminum or "Al"	US-PGPUB	2003/09/15 18:02
_	1	であるのでは、のでは、これでは、これでは、これでは、これでは、これでは、これでは、これでは、これ	USPAT;	2003/09/15 18:03
	1	silver or "Ag" or chrome or chromiumn or	US-PGPUB	2000,00,10 10.00
	1	"6686354mePNhick\$4)	USPAT;	2003/09/15 18:03
			US-PGPUB	
-	1	"5723387".PN.	USPAT;	2003/09/15 18:07
			US-PGPUB	
-	1	"5739579".PN.	USPAT;	2003/09/15 18:07
			US-PGPUB	
_	1	"5753967".PN.	USPAT;	2003/09/15 18:08
		WE025760H PW	US-PGPUB	00004004:-
_	1	"5935762".PN.	USPAT;	2003/09/15 18:08
	-	"500007" DN	US-PGPUB	2002/00/25 20 52
-	1	"5989997".PN.	USPAT;	2003/09/15 18:09
_	1	"6001414".PN.	US-PGPUB USPAT;	2003/09/15 18:09
		OVOLILI .IN.	US-PGPUB	2003/09/13 18:09
_	1	"6001733".PN.	USPAT;	2003/09/15 18:10
			US-PGPUB	2000/00/10 10:10
_	1	"6025226".PN.	USPAT;	2003/09/15 18:11
			US-PGPUB	, ,
_	1	"6027994".PN.	USPAT;	2003/09/15 18:11
			US-PGPUB	

-	1	"6028362".PN.	USPAT; US-PGPUB	2003/09/15 18:12
-	1	"6033977".PN.	USPAT;	2003/09/15 18:12
_	1258	((dual adj damascene) or (((multilevel or multi adj level) same interconnect\$3) same semiconduct\$4)).ti,ab.	US-PGPUB USPAT; US-PGPUB; EPO; JPO;	2004/07/22 17:26
_	612	(((dual adj damascene) or (((multilevel or multi adj level) same interconnect\$3) same	IBM_TDB USPAT; US-PGPUB;	2004/07/22 17:28
_	588	semiconduct\$4)).ti,ab.) and etch\$3 adj stop\$4 same (insulat\$3 or dielectric\$4) ((((dual adj damascene) or (((multilevel or multi adj level) same interconnect\$3)	EPO; JPO; IBM_TDB USPAT; US-PGPUB;	2004/07/22 17:31
		same semiconduct\$4)).ti,ab.) and etch\$3 adj stop\$4 same (insulat\$3 or dielectric\$4)) and (via or hole or void or opening or trench\$3 or plug\$3) same (conduct\$4 or metal\$8)	EPO; JPO; IBM_TDB	
-	385	<pre>(((((dual adj damascene) or (((multilevel or multi adj level) same interconnect\$3) same semiconduct\$4)).ti,ab.) and etch\$3 adj stop\$4 same (insulat\$3 or dielectric\$4)) and (via or hole or void or</pre>	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/22 17:32
_	193	opening or trench\$3 or plug\$3) same (conduct\$4 or metal\$8)) and etch\$3 adj stop\$4 same (resist or photoresist) (((((dual adj damascene) or (((multilevel	USPAT;	2004/07/22 17:33
	-	or multi adj level) same interconnect\$3) same semiconduct\$4)).ti,ab.) and etch\$3 adj stop\$4 same (insulat\$3 or dielectric\$4)) and (via or hole or void or opening or trench\$3 or plug\$3) same	US-PGPUB; EPO; JPO; IBM_TDB	
		<pre>(conduct\$4 or metal\$8)) and etch\$3 adj stop\$4 same (resist or photoresist)) and (insulat\$3 or dielectric) same ( (("USG" or oxide or "O.sub."?) same (high adj density adj plasma or "HDP")) or (oxide or</pre>		
		"O.sub."?) same (plasma adj enhanced adj chemical adj vapor adj deposition or plasma adj enhanced adj "CVD" or plasma adj "ECVD" or "PECVD" or low adj pressure		
		adj chemical adj vapor adj deposition or low adj pressure adj "CVD" or "LPCVD") or spin adj on adj glass or "SOG" or tetra adj ethyl adj ortho adj silicate or		
		tetraethyl adj orto adj silicate or tetraethyl adj orthosilicate or tetra adj ethylorthosilicate or tetraethylorthosilicate or "TEOS" )		

	(((((((dual adj damascene) or (((multilevel or multi adj level) same interconnect\$3) same semiconduct\$4)).ti,ab.) and etch\$3 adj stop\$4 same (insulat\$3 or dielectric\$4)) and (via or hole or void or opening or trench\$3 or plug\$3) same (conduct\$4 or metal\$8)) and etch\$3 adj stop\$4 same (resist or photoresist)) and (insulat\$3 or dielectric) same ((("USG" or oxide or "O.sub."?) same (high adj density adj plasma or "HDP")) or (oxide or "O.sub."?) same (plasma adj enhanced adj chemical adj vapor adj deposition or plasma adj "ECVD" or "PECVD" or low adj pressure adj chemical adj vapor adj deposition or low adj pressure adj "CVD" or "LPCVD") or spin adj on adj glass or "SOG" or tetra adj ethyl adj ortho adj silicate or tetraethyl adj	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/22 17:36
- 90	orto adj silicate or tetraethyl adj orthosilicate or tetra adj ethylorthosilicate or tetraethylorthosilicate or "TEOS" )) and (insulat\$3 or dielectric) same thick\$4	USPAT;	2004/07/22 17:38
	((((((((dual ad) Gamascene) or (((multilevel or multi adj level) same interconnect\$3) same semiconduct\$4)).ti,ab.) and etch\$3 adj stop\$4 same (insulat\$3 or dielectric\$4)) and (via or hole or void or opening or trench\$3 or plug\$3) same (conduct\$4 or metal\$8)) and etch\$3 adj stop\$4 same (resist or photoresist)) and (insulat\$3 or dielectric) same ((("USG" or oxide or "O.sub."?) same (high adj density adj plasma or "HDP")) or (oxide or "O.sub."?) same (plasma adj enhanced adj chemical adj vapor adj deposition or plasma adj enhanced adj "CVD" or plasma adj "ECVD" or "PECVD" or low adj pressure adj chemical adj vapor adj deposition or low adj pressure adj "CVD" or "LPCVD") or spin adj on adj glass or "SOG" or tetra adj ethyl adj ortho adj silicate or tetraethyl adj orthosilicate or tetraethyl adj orthosilicate or tetraethyl adj orthosilicate or tetraethyl adj orthosilicate or tetraethyl adj orthosilicate or tetraethyl adj orthosilicate or tetraethyl adj orthosilicate or tetraethyl adj orthosilicate or tetraethyl or "N.sub."?) same (plasma adj enhanced adj chemical adj vapor adj deposition or plasma adj enhanced adj "CVD" or plasma adj "ECVD" or "PECVD")) or (silicon or "Si") adj oxynitride or siliconoxynitride or silicon adj "ON" or "SiON" or (tantalum or "Ta") adj oxide or "Ta.sub.2" adj "O.sub.5" or (zinc or "Zn") adj oxide or "Zr" adj "O.sub.2" or (hafnium or "Hf") adj oxide or "Al.sub.2" adj "O.sub.3")	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/22 17:38

- 83	1 , , , , , , , , , , , , , , , , , , ,	USPAT;	2004/07/22 17:40
	(((multilevel or multi adj level) same	US-PGPUB;	
	interconnect\$3) same	EPO; JPO;	
	semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
	stop\$4 same (insulat\$3 or dielectric\$4))	_	
	and (via or hole or void or opening or		
	trench\$3 or plug\$3) same (conduct\$4 or		
	metal\$8)) and etch\$3 adj stop\$4 same		
	(resist or photoresist)) and (insulat\$3 or		
	dielectric) same ( (("USG" or oxide or		ļ
	"O.sub."?) same (high adj density adj		
	plasma or "HDP")) or (oxide or "O.sub."?)		
	same (plasma adj enhanced adj chemical adj		
	vapor adj deposition or plasma adj		
	enhanced adj "CVD" or plasma adj "ECVD" or		
	"PECVD" or low adj pressure adj chemical		
	adj vapor adj deposition or low adj		
	pressure adj "CVD" or "LPCVD") or spin adj		
	on adj glass or "SOG" or tetra adj ethyl		
	adj ortho adj silicate or tetraethyl adj		
	orto adj silicate or tetraethyl adj		
	orthosilicate or tetra adj		
	ethylorthosilicate or		
	tetraethylorthosilicate or "TEOS" )) and		
	(insulat\$3 or dielectric) same thick\$4)		
	and etch\$3 adj stop\$4 same ( ((nitride or		
	"N.sub."?) same (plasma adj enhanced adj		
	chemical adj vapor adj deposition or		
,	plasma adj enhanced adj "CVD" or plasma		
	adj "ECVD" or "PECVD")) or (silicon or		
	"Si") adj oxynitride or siliconoxynitride		
	or silicon adj "ON" or "SiON" or (tantalum		
	or "Ta") adj oxide or "Ta.sub.2" adj		
	"O.sub.5" or (zinc or "Zn") adj oxide or		
	"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
	or "Zr") adj oxide or "Zr" adj "O.sub.2"		
	or (hafnium or "Hf") adj oxide or "Hf0" or		
	(aluminum or "Al") adj oxide or "Al.sub.2"		
	adj "O.sub.3" )) and etch\$3 adj stop\$4		
	same thick\$4		

	80   (((((((((dual adj damascene) or	USPAT;	2004/07/22 17:42	٦
	(((multilevel or multi adj level) same	US-PGPUB;		-
	interconnect\$3) same	EPO; JPO;		
	semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB		-
	stop\$4 same (insulat\$3 or dielectric\$4))	_		
	and (via or hole or void or opening or			
	trench\$3 or plug\$3) same (conduct\$4 or			
	metal\$8)) and etch\$3 adj stop\$4 same			
	(resist or photoresist)) and (insulat\$3 or		ļ	
	dielectric) same ( (("USG" or oxide or			
	"O.sub."?) same (high adj density adj			
	plasma or "HDP")) or (oxide or "O.sub."?)			
	same (plasma adj enhanced adj chemical adj			
	vapor adj deposition or plasma adj			
	enhanced adj "CVD" or plasma adj "ECVD" or			
	"PECVD" or low adj pressure adj chemical			
	adj vapor adj deposition or low adj			
	pressure adj "CVD" or "LPCVD") or spin adj			
	on adj glass or "SOG" or tetra adj ethyl			
İ	adj ortho adj silicate or tetraethyl adj	1		1
	orto adj silicate or tetraethyl adj			
	orthosilicate or tetra adj			
	ethylorthosilicate or			
	tetraethylorthosilicate or "TEOS" )) and	İ		ĺ
	(insulat\$3 or dielectric) same thick\$4)			
	and etch\$3 adj stop\$4 same ( ((nitride or			
	"N.sub."?) same (plasma adj enhanced adj			
	chemical adj vapor adj deposition or			
	plasma adj enhanced adj "CVD" or plasma			
	adj "ECVD" or "PECVD")) or (silicon or			İ
	"Si") adj oxynitride or siliconoxynitride			
	or silicon adj "ON" or "SiON" or (tantalum			
	or "Ta") adj oxide or "Ta.sub.2" adj			
	"O.sub.5" or (zinc or "Zn") adj oxide or			
	"Zn" adj "O.sub."2 or "ZnO" or (zirconium			
	or "Zr") adj oxide or "Zr" adj "O.sub.2"			
	or (hafnium or "Hf") adj oxide or "Hf0" or			
	(aluminum or "Al") adj oxide or "Al.sub.2"			
	adj "O.sub.3" )) and etch\$3 adj stop\$4			
	same thick\$4) and (conduct\$4 or metal\$8)			
	same (aluminum or "Al" or copper or "Cu"			
	or gold or "Au" or silver or "Ag" or			
	chrome or chromium or "Cr")			

-	64	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	USPAT;	2004/07/22 17:46
ļ		(((multilevel or multi adj level) same	US-PGPUB;	
		interconnect\$3) same	EPO; JPO;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM_TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))		
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ( (("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj vapor adj deposition or plasma adj		
				1
		enhanced adj "CVD" or plasma adj "ECVD" or "PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetra adj etnyl		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS" )) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same ( (nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
ĺ		adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
,		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "HfO" or		
,		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3" )) and etch\$3 adj stop\$4		
		same thick\$4) and (conduct\$4 or metal\$8)		
		same (aluminum or "Al" or copper or "Cu"		
		or gold or "Au" or silver or "Ag" or		
		chrome or chromium or "Cr")) and		
		(conduct\$4 or metal\$8 or aluminum or "Al"		
	i	or copper or "Cu" or gold or "Au" or		
		silver or "Ag" or chrome or chromium or		
	ء سندم	"Cr") same thick\$4		
-	2819	430/312,314,316-317.ccls.	USPAT;	2004/07/22 17:50
			US-PGPUB;	
1			EPO; JPO;	
	0000	420/504 600 604 608 662 722 722	IBM_TDB	
-	8322	438/584,622,624,637-638,700,702,723-724.ccl		2004/07/22 17:50
1			US-PGPUB;	
			EPO; JPO;	
ŀ	00.61	A1 - 44 A	IBM_TDB	
-	2261	dual adj damascene and (etch\$3 near3	USPAT;	2004/02/19 08:22
		stop\$4 or hardmask\$3 or hard\$4 near3	US-PGPUB;	
İ	ļ	mask\$3)	EPO; JPO;	
			IBM_TDB	

-	790	/ (/// /	USPAT;	2004/07/22 17:51
		438/584,622,624,637-638,700,702,723-724.ccl	SUB-PGPUB;	
		and (dual adj damascene and (etch\$3 near3	EPO; JPO;	
		stop\$4 or hardmask\$3 or hard\$4 near3	IBM TDB	
		mask\$3)) not (((((((((dual adj	_	]
		damascene) or (((multilevel or multi adj		
		level) same interconnect\$3) same		
		semiconduct\$4)).ti,ab.) and etch\$3 adj		
		stop\$4 same (insulat\$3 or dielectric\$4))		
		and (via or hole or void or opening or		i
	·	trench\$3 or plug\$3) same (conduct\$4 or	•	
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ( (("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "0.sub."?)		
f	İ	same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low add programs add "ECVD" or		·
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS" )) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same ( ((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
	İ	chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
]		adj "ECVD" or "PECVD")) or (silicon or		
İ		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj	ì	
	ļ	"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "HfO" or		
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3" )) and etch\$3 adj stop\$4		,
		same thick\$4) and (conduct\$4 or metal\$8)		
		same (aluminum or "Al" or copper or "Cu"		
		or gold or "Au" or silver or "Ag" or		ļ
		chrome or chromium or "Cr"\\ and		

chrome or chromium or "Cr")) and (conduct\$4 or metal\$8 or aluminum or "Al" or copper or "Cu" or gold or "Au" or silver or "Ag" or chrome or chromium or "Cr") same thick\$4)